

IN THE CLAIMS

Claims 1-39 (canceled)

Claim 40 (new): A process for wet oxidation of a feedstock comprising at least one non-volatile oxidisable material, which process includes at least the steps of:

- (a) continuously introducing the feedstock into a reactor;
- (b) contacting the feedstock at temperature and pressure with an oxidant in the presence of a catalyst to produce a vapour phase comprising at least some oxidation products and a liquid phase; and
- (c) continuously removing at least some of the vapour phase comprising at least some oxidation products from the reactor while retaining the liquid phase in the reactor.

Claim 41 (new): A process as claimed in claim 40 wherein the feedstock is an aqueous liquid, solution, suspension, colloid, emulsion or other mixture.

Claim 42 (new): A process as claimed in claim 40 wherein the feedstock comprises a slurry formed from substantially dry material to which is added an aqueous liquid.

Claim 43 (new): A process as claimed in claim 40 wherein the oxidisable material comprises less than about 10% by weight of the feedstock.

Claim 44 (new): A process as claimed in claim 40 wherein the oxidisable material comprises a mixture of substances.

Claim 45 (new): A process as claimed in claim 40 wherein the

oxidisable material is a waste product selected from industrial waste, consumer waste or a component thereof.

Claim 46 (new): A process as claimed in claim 45 wherein the oxidisable material is waste selected from the group consisting of: dairy shed waste; pig and chicken waste; milk processing plant waste; milk, cheese and butter vat wash downs; food processing waste; waste from the wine industry and brewing industry; food waste; shipboard waste; waste in environmentally sensitive locations; waste from the wash downs and oil-traps of petroleum service stations and garages; waste fats and proteins from the meat processing industry; wool-scouring waste; sewage; medical waste; fibre, ink and polymeric material from the deinking waste produced in the recycling of paper; waste paper and paper products; waste from the wood processing industry including waste wood and wood products, wood fibre, saw dust and wood treated with preservatives; rubber waste; plastic waste; and tannin and colorants from wood pulping streams.

Claim 47 (new): A process as claimed in claim 40 wherein the process is applied to the reclamation of sites contaminated by organic materials.

Claim 48 (new): A process as claimed in claim 40 wherein the oxidisable material comprises an organic substance.

Claim 49 (new): A process as claimed in claim 48 wherein the organic substance is selected from the group consisting of: lipids; proteins; carbohydrates; mineral oils; vegetable oils; waxes; and hydrocarbons.

Claim 50 (new): A process as claimed in claim 49 wherein the organic substance is a carbohydrate selected from starch and

cellulose.

Claim 51 (new): A process as claimed in claim 40 wherein the oxidisable material includes one or more oxidisable inorganic compounds.

Claim 52 (new): A process as claimed in claim 40 wherein the oxidant is selected from the group consisting of: air; oxygen; ozone; peroxide; and mixtures thereof.

Claim 53 (new): A process as claimed in claim 40 wherein the temperature is between about 100°C and about 350°C.

Claim 54 (new): A process as claimed in claim 40 wherein the temperature is between about 190°C and about 300°C.

Claim 55 (new): A process as claimed in claim 40 wherein the temperature is between about 190°C and about 280°C.

Claim 56 (new): A process as claimed in claim 40 wherein the temperature is between about 190°C and about 210°C.

Claim 57 (new): A process as claimed in claim 40 wherein the temperature is between about 220°C and about 240°C.

Claim 58 (new): A process as claimed in claim 40 wherein the pressure is between about 0.7 MPa and about 17.2 MPa.

Claim 59 (new): A process as claimed in claim 40 wherein the pressure is between about 1.4 MPa and about 13.0 MPa.

Claim 60 (new): A process as claimed in claim 40 wherein the pressure is between about 2.0 MPa and about 3.5 MPa.

Claim 61 (new): A process as claimed in claim 40 wherein the pressure is between about 2.1 MPa and about 2.9 MPa.

Claim 62 (new): A process as claimed in claim 40 wherein the pressure is between about 2.9 MPa and about 3.4 MPa.

Claim 63 (new): A process as claimed in claim 40 wherein the catalyst is a homogenous catalyst.

Claim 64 (new): A process as claimed in claim 40 wherein the catalyst is selected from the group consisting of the transition metal ions and mixtures thereof.

Claim 65 (new): A process as claimed in claim 40 wherein the catalyst is selected from the group consisting of: copper (II) ions; iron (II) ions; manganese (II) ions; and mixtures thereof.

Claim 66 (new): A process as claimed in claims 40 wherein the catalyst is copper (II) ions.

Claim 67 (new): A process as claimed in claim 40 wherein the vapour phase is removed from the reactor by flash vaporisation.

Claim 68 (new): A process as claimed in claim 40 further including the step of reducing the temperature and pressure of the vapour phase to recover at least one oxidation product.

Claim 69 (new): A process as claimed in claim 68 wherein the oxidation product is selected from the group consisting of: carbon dioxide; formic acid; acetic acid; higher organic acids; and mixtures thereof.

Claim 70 (new): A process as claimed in claim 40 further comprising the step of recovering at least one non-volatile salt from the liquid phase.